

PDR RID Report

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Document

RID ID	PDR	22
Review	FOS	
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Section

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Figure Table

Category Name Design

Actionee HAIS

Sub Category

Subject UserStation Specifications

Description of Problem or Suggestion:

Does the workstation class proposed for the UserStation have sufficient capacity, particularly with respect to local disk and MIPs, support AM-1 needs?

Originator's Recommendation

Revisit estimates. Inputs from previous missions would be helpful.

GSFC Response by:

GSFC Response Date

HAIS Response by: D. Herring

HAIS Schedule 1/20/95

HAIS R. E. A. Miller

HAIS Response Date 1/20/95

Based on preliminary prototype analysis results and heritage missions, it is felt that the proposed User Station class computers proposed for FOS have sufficient capacity, particularly with respect to local disks and MIPs to support AM-1 needs.

Previous heritage missions have had User Station class computers with MIPs in 3-4 range (i.e., GIMTACS and PACS). The proposed User Station class computers are in the 80 SPECint92 range. While the CPU power between MIPS and SPECint92 is not identical, they are similar. Hence, the power in the proposed User Station class computers is significantly larger.

The driving CPU-intensive tasks on previous heritage missions was the telemetry decommutation processing. Results from prototyping using telemetry packets similar to those defined on the AM-1 mission are that the CPU load on the User Station is approximately 1% of the CPU for a 16 kbps telemetry rate. This data, as well as heritage User Station display CPU load data, provided the FOS team with the confidence that the proposed User Station class computers will fulfill the processing requirements of the FOS architecture and provide sufficient margin for the requisite growth that needs to be planned at this stage of every software development project.

The User Station local disk size is based on preliminary disk analysis results including the requisite 50% spare capacity. The current disk size is 2 GB.

The FOS development team plan is to continue the evolution of the prototype effort to add further functionality to the FOS prototype, specifically with the intention of getting further insight into CPU loading impacts on the User Stations. This effort will be coupled with the analysis performed during the detailed design phase to refine the performance specifications for the FOS User Station class computers. Similarly, the disk analysis will be refined during the detailed design phase, and adjustments, if applicable, will be made to the local disk drive specifications.

Status Closed

Date Closed 2/1/95

Sponsor Johns

***** Attachment if any *****